

Applicants: Robert J. Winchester, et al.
Serial No.: 09/773,876
Filed: January 31, 2001
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REMARKS

Claims 18 and 19 are pending in the subject application. No claim has been added, canceled, or amended herein. Accordingly, claims 18 and 19 are still pending and under examination.

In view of the arguments set forth below, applicants maintain that the Examiner's objection and rejection made in the June 2, 2004 Office Action have been overcome, and respectfully request that the Examiner reconsider and withdraw same.

Rejection Under 35 U.S.C. §103(a)

The Examiner rejected claims 18 and 19 under 35 U.S.C. §103(a) as being allegedly unpatentable over D'Apuzzo et al. (Eur. J. Immunol., 27:1788-1793 (1997)) in view of Gerard et al. (U.S. Patent No. 6,537,764 issued March 25, 2003).

In response to the Examiner's rejection, applicants respectfully traverse.

Applicants assert that the Examiner has failed to establish a *prima facie* case of obviousness. Applicants direct the Examiner's attention to M.P.E.P §2143.03, which states that "[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

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Furthermore, according to M.P.E.P. §2143, to establish a *prima facie* case of obviousness, the Examiner must demonstrate three criteria with respect to each claim. First, as indicated above, the cited references, when combined, teach or suggest every element of the claim. Second, one of ordinary skill would have been motivated to combine the teachings of the cited references at the time of the invention. And third, there would have been a reasonable expectation that the claimed invention would succeed.

In light of these requirements, applicants assert that the cited references fail to support a *prima facie* case of obviousness for claims 18 and 19.

Claims 18 and 19 provide an assay for determining whether a non-peptidyl agent inhibits the activation of a CXCR4 receptor by the chemokine, stromal cell-derived factor 1 ("SDF-1"). These claims are based, at least in part, upon applicants' surprising discovery that SDF-1 is specifically overexpressed in cultured synoviocytes derived from joints affected by rheumatoid arthritis. Accordingly, the invention may be practiced to identify non-peptidyl agents which can block the interaction of SDF-1 with its receptor, CXCR4, on peripheral immune cells infiltrating the joint, thereby treating rheumatoid arthritis.

In support of the rejection, the Examiner stated that D'Apuzzo et al. teach that antiCXCR4 antibody inhibits activation of CXCR4 receptor by SDF-1, wherein the B cell response requires CXCR4 activation to take place. The

Examiner conceded that D'Apuzzo et al. alone does not teach the use of said method with a non-peptidyl agent, as taught by the subject invention. However, the Examiner asserted that Gerard et al. disclose that nonpeptide inhibitors of chemokine function are well known in the art as is the desirability to identify such compounds. Therefore, the Examiner asserted that it would have been *prima facie* obvious to one of ordinary skill in the art to have created the claimed invention because D'Apuzzo et al. teach the claimed method except for use of the assay to screen non-peptidyl agents and Gerard et al. disclose that non-peptide inhibitors of chemokine function are well known in the art as is the desirability to identify such compounds.

Applicants disagree with the Examiner's position. The cited references, in combination, fail to teach all elements of the instant method. In particular, Gerard et al. only teach that nonpeptide inhibitors of C-C chemokine receptor 3 ("CKR-3") exist and that there is some desire to identify inhibitors of CKR-3. Gerard et al. fail to teach that any inhibitors of CXCR4 exist or that the identification of specific inhibitors of CXCR4 is desirable. Therefore, one of ordinary skill in the art would not arrive at the subject invention by combining the teachings of Gerard et al., i.e. non-peptide inhibitors of CKR-3 exist, with the teachings of D'Apuzzo et al., i.e. antiCXCR4 antibody inhibits activation of CXCR4 by SDF-1, nor would she be motivated to try.

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For the reasons above, the cited references combined fail to teach the elements of the claimed assay. Absent such teaching, there could not have been a motive to combine or a reasonable expectation of success.

In view of the above remarks, applicants maintain that the Examiner has failed to set forth a *prima facie* case of obviousness, and that accordingly, claims 18 and 19 satisfy the requirements of 35 U.S.C. §103(a).

Summary

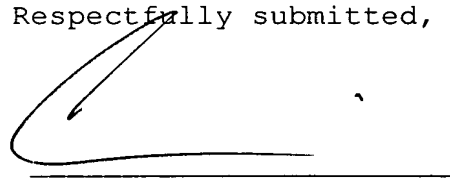
Applicants maintain that the claim pending is in condition for allowance. Accordingly, allowance is respectfully requested.

If a telephone conference would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

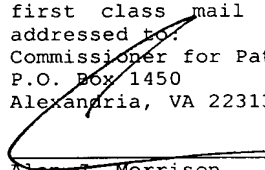
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No fee is deemed necessary in connection with the filing of this Communication. However, if any fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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